

EL501

IP Satellite Hub

Elevation Product Family

ELEVATION

Description

The EL501 is the state-of-the-art satellite hub designed for IP applications over satellite in compliance with the DVB-S2 standard. The Elevation Hub combines cutting edge modulation with the unique combination of IP shaping and satellite segment bandwidth management. The Hub also incorporates the renowned FlexACM® technology which optimizes the satellite link to full efficiency.

Depending on the application and the activated features the Elevation Hub can be used in conjunction with professional IP receivers such as the EL940 and EL970 or professional modems such as the Newtec EL470.

The EL501 hub can be set-up to match the size and the satellite network configuration (one-way or two-way) independent of speed rate, modulation and amount of return links. Through an auto-switching Gigabit Ethernet interface the Newtec hub integrates seamlessly with terrestrial IP networks and equipment.

As a unique functionality in the market the EL501 hub provides an adaptive and integrated IP shaping and satellite bandwidth management. When the throughput over satellite varies due to fading conditions, interference or when used with inclined orbit satellites, the Elevation hub engine will auto-adapt the settings in accordance with Service Level Agreement (SLA) requirements and provide maximum efficiency. To enhance throughput an additional acceleration and compression can be selected as an option.

The Elevation hub embeds the price-winning FlexACM® module. FlexACM® combines a set of advanced technologies which work together to ensure the satellite link is operating at full efficiency. These advanced technologies include Adaptive Coding and Modulation (ACM), Cross-Layer Optimization, Noise & Distortion Estimator (NoDE) and Thin Margin Manager (ThiMM). All of them individually reduce the satellite link margin and contribute to optimizing the IP link.

These combined groundbreaking integrated technologies ensure that the Elevation Hub is a powerful and fully optimised solution for IP trunking, IP Access and Government IP networks over satellite.

Clean Channel Technology™ is available on the EL501 IP Hub as an option. Clean Channel Technology™ further improves satellite efficiency by up to 15% compared to the current DVB-S2 standard. Newtec's customers will be able to immediately benefit from Clean Channel Technology, as it is available as a software field upgrade for existing Newtec equipment.

Key Features

- DVB-2 CCM, VCM and ACM compliant
- DVB-S2 Multistream
- All modcods and baud rates enabled by default
- Data rates up to 160 Mbps in steps of 10 Mbps
- XPE, MPE, ULE, data piping encapsulation
- Price-winning FlexACM® inside
- Supports Committed (CIR) and Peak (PIR) Information rate policies (even in ACM)
- Hierarchies can be changed on-the-fly
- Adaptive traffic shaping

- Supports equal and weighted bandwidth distribution
- Extended L-band (950-2150 MHz)
- Optional Network Optimization (acceleration, compression, prefetching, encryption)
- Optional Clean Channel Technology™
- Optional Acceleration and Compression technology

Main Advantages

- Boosts satellite link performance
- Reduces bandwidth costs and increases revenues
- Limits link margins and enables end-to-end efficiency
- Unique combination of IP shaping and satellite bandwidth management
- Seamless integration with terrestrial IP networks
- Cutting edge modulation
- High versatility and flexibility
- Ideal for Inclined Orbit Satellite operations
- Optimal availability even in fading and interference conditions
- Includes professional Implementation Services
- World-class network optimization technology

Applications

- IP Trunking networks
- IP Access networks
- IP Backhauling networks
- Government Fixed IP Networks
- Unmanned Aerial Vehicles (UAV) and Manned Aircrafts
- Content Contribution and Distribution over IP
- Corporate Networks
- Maritime Networks

Related Products

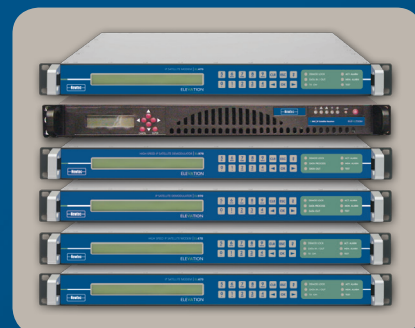
EL470/478 IP Satellite Modems

EL970/978 IP Satellite Modems

EL940 IP Receiver

EL848/838 High-Speed PEP Server and Gateway

EL840/830 PEP-box Server and Gateway



SHAPING THE FUTURE OF SATELLITE COMMUNICATIONS

www.newtec.eu

Rev.3/11.2012

Specifications – EL501 (R9)

General

System Architecture

- One-way or two-way point-to-multipoint operation
- IPv4 or Layer2 (VLAN) modes
- Redundancy as option for Forward (1+1) and Return links (7+1)
- Built with proven Newtec FlexACM technology
- Remotes can be purchased separately
- EL470/EL478 IP modems
- EL970/EL978 IP demodulators
- EL940 IP Receiver
- Salable/Extendible with more remotes and/or higher speeds as the need arises

Physical

- Collection of 1U rack-mountable devices
 - Total number of units depending on configuration
 - Minimum 2U for non-redundant one way system
- Ethernet switch included
- Power: 100/240AC, 50/60Hz
- Operational Temperature: 10°C-40°C
- CE label

Interfaces

Input/Output

- User Traffic on Gigabit Ethernet in/out
- M&C connectivity via separate Ethernet link
- All RF Interfaces on extended L-band (950-2150 Mhz)

Configuration/Monitoring

- WEB GUIs to monitor all Newtec devices
- Command line interface to Ethernet switch
- SNMP to most devices

Functionalities

- DVB-S2 outbound (inbound optional)
 - 0.256-45Mbaud
 - All modcods, normal/short frames , pilots on/off
 - 32APSK limited to 33Mbaud
- VCM Multistream support
- FlexACM Optional
- Supports XPE, MPE and ULE encapsulations
- VLAN and IP traffic shaping using Cross-Layer-Optimization to take variable bandwidth into account
- Allows for overbooking and extensive SLA definition
- Accounting data accessible for external processing
- Optional Network Optimization Technology (Acceleration, Compression, Prefetching, Encryption) up to 160 Mbps
- Optional Clean Channel Technology™
- Optional Acceleration and Compression technology

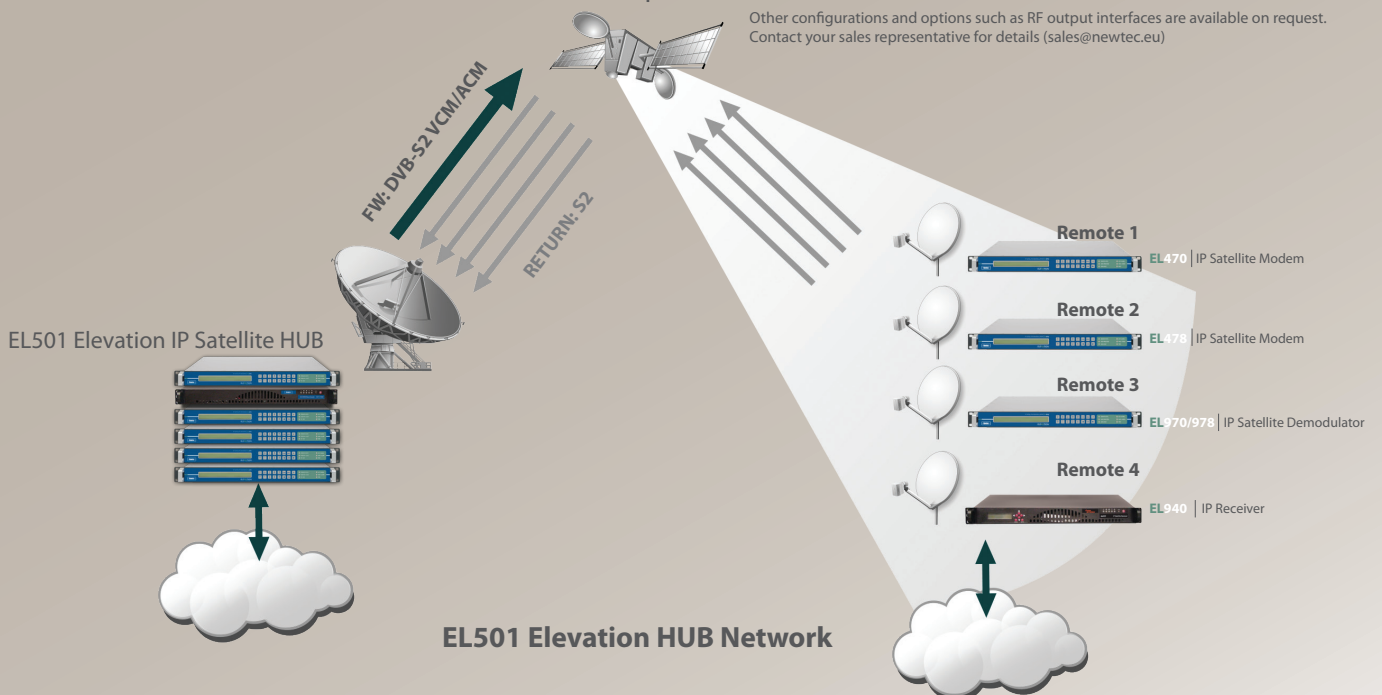
Implementation Services

- Project management
- Network implementation design
- Hub configuration
- Factory Integration and Test
- Logistics documentation
- On-site installation and commissioning
- Remote installation support for remote sites
- Satellite System handover
- Start-up care & customer support hand-over

Ordering Information

EL501 Elevation Hub	Order n°
Default configuration	
DVB-S2 IP hub including Ethernet switches, dynamic shaper, multi-site VCM modulation controller and modulation up to 32APSK Single thread Including implementation services and Carepack	EL501
Configuration options	
Category	Max. 1 option per category
Return channel demodulator (select # return channels)	0-n
Outbound redundancy (1+1)	Yes/No
Return channel redundancy (N+1)	Yes/No
Outbound rate license (select from drop-down)	10-160 Mbps
ACM license for selected rate	Yes/No
Network Optimization (Acceleration, Compression, Prefetching, Encryption)	Yes/No
Network Optimization Redundancy	Yes/No
Clean Channel Technology™	Yes/No

Other configurations and options such as RF output interfaces are available on request. Contact your sales representative for details (sales@newtec.eu)



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